

U. S. FISH AND WILDLIFE SERVICE
PRESCRIBED BURNING PLAN

Stillwater NWR
National Wildlife Refuge

Roadside Ditches, Canals, and Brush Piles

Prepared By: Rob Bundy/Bill Henry Date: 03/05/97

Reviewed By: _____ Date: _____
Robert Flores Asst. Refuge Manager

Reviewed By: _____ Date: _____
Regional Fire Management Coordinator

The approved Prescribed Fire Plan constitutes the authority to burn. No one has the authority to burn without an approved plan or in a manner not in compliance with the approved plan. Actions taken in compliance with the approved Prescribed Fire Plan will be fully supported.

Reviewed By: _____ Date: _____
Dan Walsworth Refuge Manager

ANNUAL PRESCRIBED BURNING PLAN

Station: Stillwater NWR

Name of Area: Stillwater WMA and NWR Roadside Ditches, Delivery Canals and Brush piles

Specific Portion of Above: All Units, Roads and Delivery Canals.

Legal Description: N/A

County: Churchill

Physical Features: Several delivery canals and road ditches at the Stillwater NWR and WMA have become overgrown with dense emergent and annual vegetation and no longer facilitate effective transfer of water. Additionally, brush piles created from salt cedar (*Tamarix ramosissima*) and other brush control efforts need removal through burning.

Vegetative Cover Types: (Species, Height, Density, etc.) Areas considered are primarily comprised of late successional, emergent plant associations including narrow leaved cattail (*Typha domingensis*), narrow leaved cattail/hardstem bulrush (*Typha domingensis/Scirpus acutus*), broad leaved cattail (*Typha latifolia*), and salt cedar (*Tamarix ramosissima*). Emergent communities are extremely dense and range from 4' to 8' in height. Additionally, several roadsides need to be spot burned to remove annual weeds, woody vegetation, and to facilitate regeneration of perennial grass species including inland saltgrass (*Distichlis spicata*).

Primary Resource Objectives: To return vegetative coverage to early successional, more productive conditions; to remove dense emergent, woody, and annual vegetation from irrigation canals to increase water transfer efficiency; and to remove brush piles created during other management activities.

Specific Objectives of Burn: To completely remove dense emergent and annual vegetation from interior portions of irrigation canals to increase water transfer efficiency. To set back vegetative succession on approximately 20% of upland native grass pastures on a five year cycle (i.e. burn approximately 20% annually at different saltgrass pasture locations). To clear areas where brush piles were created related to other management activities.

Historical Fire Occurrence: Details of burn history are lacking; however, fire was likely not a major presence in the Lahontan Valley. Periodic burning of residual vegetation during wetland drying cycles has occurred related to anthropogenic sources (i.e. Northern Paiute People) and natural lightning strikes. In the absence of biological controls (e.g. muskrat: *Ondatra zibethicus*), burning appears to be the most viable and desirable option to set back succession in wetland management units and water delivery systems. Periodic removal of dense, residual vegetation is necessary to productive wetland and upland pasture cycles.

PRE-BURN PLANNING AND ACTION

Site Preparation: (what, when, how, & who): To be considered on an area by area basis. Most proposed burns will require little site preparation.

Safety Considerations: Weather conditions will be monitored to ensure ideal conditions on the day of the proposed burn. Low fuel cover on adjacent upland areas should minimize the possibility of fire spread beyond the proposed burn area: however, escape routes, vehicles, and a fire truck will be identified prior to and available on the day of the proposed burn to facilitate emergency evacuation of personnel. The local fire department and sheriff's office will be contacted and will be available prior to burn. Areas where burns are proposed will be closed to public travel for the duration of the burn to minimize possible complications with burning procedures or escape routes.

Media Contacts: The local area paper (Lahontan Valley News) will be notified to inform area landowners and residents that we will be performing occasional burns. The contact will be:

1. Larry O'Hanlon	Lahontan Valley News	Fallon
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The Fallon news media will be advised to help inform the local community as to our intentions.

Special Constraints and Considerations: Most burns covered under this plan will be small in affected area and can typically be covered by maintenance staff at the Stillwater NWR. Closure of proposed burn areas and fire pumper truck availability will be considered prior to each burn.

Communication and Coordination: The local fire department and refuge office dispatch will be notified prior to the proposed burn. Two teams of refuge personnel and the refuge fire truck will be in contact by shortwave radio on a frequency of 163.075 mhz. Other frequencies of concern that will be monitored include:

1. Nevada Division of Wildlife	155.190
2. Churchill County Sheriff	151.475

Interagency Coordination: The proposed burn areas are relatively isolated and fall completely within Stillwater NWR or WMA boundaries; however, adjacent lands may be privately owned, administered by the Bureau of Land Management (BLM), or managed by the Truckee Carson Irrigation District. All adjacent concerns will be notified prior to the proposed burn. Additionally, staff with the Nevada Department of Wildlife (NDOW) will be informed and invited to participate where their expertise may enhance success of proposed burns. The local response unit is the Bureau of Land Management.

IGNITION, BURNING, and CONTROL

	Planned or Proposed	Actual
Scheduling:		
Dates	<u>As Appropriate</u>	<u> </u>
Time of day	<u>Mid morning - Early afternoon</u>	<u> </u>

	Acceptable Prescription Range			
	Low	Desired	High	Actual
Temperature (broad range):	30	50	70	
Relative Humidity: (high - low):	15		50	
Wind Direction:		as required		
Wind Speed (20' forecast):	0		10	
Wind Speed (Mid Flame): (40% of 20' or eye level)	0		5	
Cloud Cover (%):	0		50	

Environmental Conditions:

	Low/High
Soil Moisture (%):	
Fuel Moisture:	8%
Litter/Duff Moisture:	60%
Live Fuel Moisture:	0%

Fire Behavior:

Type of Fire:	Strip flank fires or spot fires	
Rate of Spread:	104 chains/hr	
Intensity:	30	1400
Flame Length:	12 ft	
Heat/Unit Area:	?	
Energy Release Component:	?	

Ignition Technique: Driptorch to backfire along firebreaks (located at north and east edges of proposed burn area) and strip flank firing to burn out area. Spot fire techniques for brush piles.

Prescribed Fire Organization: Most prescribed burns will be conducted by Stillwater NWR maintenance and biological staff after review and acceptance of the prescribed burn plan by regional staff. Crew briefing will immediately precede the proposed burn to ensure that personnel involved are completely aware of their particular responsibilities.

SMOKE MANAGEMENT:

Distance and Direction from Smoke Sensitive Areas: To be considered on an area to area basis. Most burns will not affect surrounding concerns as the proposed burn area will fall entirely within the Stillwater NWR and WMA and will not be of sufficient size to cause smoke hazards. However, individual burns may fall within property of the Stillwater NWR that presently fall outside refuge boundaries. In these cases, size of the proposed burn will be considered and adjacent landowners will be contacted prior to the proposed burn date.

Necessary Transport Wind Direction and Elevation: To be considered on an area by area basis. Attempts will be made to conduct the proposed burn so as to minimize smoke transport to adjacent concerns

Visibility Hazards: County and refuge roads adjacent to proposed burn sites.
Actions to Reduce Visibility Hazards: Where potential hazards are recognized, refuge roads will be closed to public travel during the prescribed burn. Ensure that wind direction is appropriate for smoke transport.

Residual Smoke Problems: Minimal.

FUNDING AND PERSONNEL:

	Equipment & Supplies	Labor	Overtime	Staff Days	Total Cost
Ignition and Control:	150\$	500\$	0\$	as required	650\$
Monitoring/Eval.:	na	100\$	0\$	as required	100\$
Total:	150\$	600\$	0\$	6	750\$

BURN DAY ACTIVITIES:

Public/Media Contacts: Local media will be notified prior to burn day.

Crews and Equipment Assignments: Refuge maintenance and biological staff.

Crew Briefing Points: A tailgate briefing will occur prior to each proposed burn to ensure that everyone is aware and comfortable with their responsibilities.

Ignition Technique: Backfires will be completed either early on the day of or immediately preceding the proposed burn where they are required. Strip flank, head, or spot fires will be ignited depending on the extent of the proposed burn and the desired results.

Personnel Escape Plan: To be considered on an area by area basis. At each site, escape plans will be outlined prior to the proposed burn.

Holding and Control: Holding and control will be accomplished by a fire pump truck and crew with flappers available to extinguish smaller spot fires which might occur. The local fire department will also be notified in case of fire control loss. Their response time should be less than 60 minutes.

Contingency Plan for Escaped Fire: To be considered on an area by area basis. Available fuel adjacent to the proposed burn site will be evaluated and the local fire department and Bureau of Land Management Fire Management Officer (FMO) will be notified prior to burning and put on standby in case of emergency.

Mop up and Patrol: Once fuel is ignited and extinguished, there should be little need for extensive monitoring. One man, should be available to patrol the proposed burn area for the following 24 hours to ensure that reignition does not occur and that all "hot spots" have been extinguished.